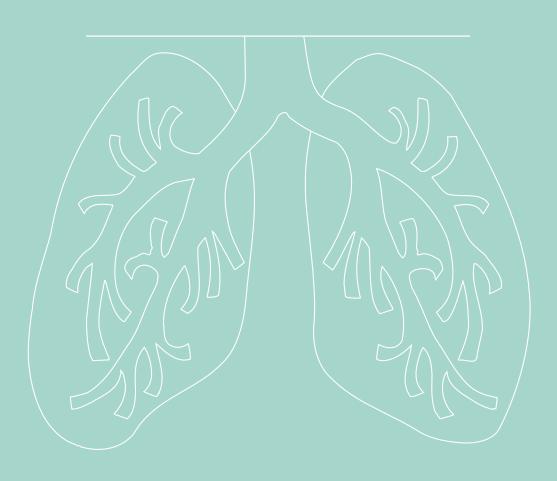
Epidemiology



Asthma in children is:

- Very common
- Often misdiagnosed
- Undertreated
- Associated with high urgent care usage
- Responsible for many sleepless nights
- The most common cause of school absences from chronic disease
- A common reason for parents (and caregivers) to miss work
- In most cases, an unnecessary reason to limit daily activities
- TREATABLE!

Epidemiology

Asthma is the most common chronic disorder in children and adolescents.

- About 5 million youngsters under 18 years of age have asthma.
 - ⇒ This includes an estimated 1.3 million children under the age of 5 years.
- Each year, children with asthma miss more than 10 million school days (on average, more than 3 times the school absences of children without asthma).
- Children living in poverty and/or inner cities have higher rates of hospitalizations and mortality from their asthma.
- · Children with asthma often limit activities unnecessarily.

For children with asthma, symptoms can interfere with:

- · Sporting events
- School trips
- Physical education
- Play activities
- Playing brass or wind instruments

Children with well-controlled asthma can do these things quite well.

Do children who are wheezing and/or coughing function well?

Consider their:

- Energy levels
- Concentration
- Attention
- Peer relations
- Physical activity
- Overall well-being

Uncontrolled asthma is expensive!

- Children use more medications when their asthma is out of control than when it is stable.
- Parents (and caregivers) lose time from work and regular activities.
- Disturbed sleep from nighttime asthma symptoms can decrease productivity at work for parents and at school for children.

Each year asthma in children accounts for:

- 3,028,000 doctor visits for children under age 15¹
- 570,000 emergency room visits for wheezing for children under age 15²
- 164,000 hospitalizations for children under age 15³
- Over 8.7 million prescriptions for children under age 174

This translates into costs of billions of dollars each year.

Expected outcomes of care for children with asthma should be high.

- Symptoms can be controlled.
- The disease can be controlled.
- Activity limitations are not necessary.

Care of our children with asthma can be improved. Most children with asthma can be managed by their primary care clinician.

Asthma is a leading cause of school absences.

- Respiratory symptoms account for 60% of school absences.
- It is not unusual to miss ≥ 10 school days/year due to asthma.
- Children with severe asthma may miss ≥ 30 days/year.

Time lost from school may negatively affect grades, academic achievement, self-esteem, and future life successes.

Source: Lenney. Ped Pulmonol 1997; S15:13

¹National Ambulatory Medical Care Survey, 1993-95 National Ambulatory Medical Care Survey, 1992-95

National Hospital Discharge Survey, 1994

National Medical Expenditure Survey, 1987

References

ATS Update: Future directions for research on diseases of the lung. Am J Respir Crit Care Med 1998; 158:320-334.

Childhood asthma - all that wheezes is not inflammation (editorial). Clinical Exp Allergy 1997; 27:991-4.

Christiansen SC, Martin SB, Schleicher NC, Koziol JA, Hamilton RG, Zuraw BL. Exposure and sensitization to environmental allergen of predominantly Hispanic children with asthma in San Diego's inner city. J Allergy Clin Immunol 1996; 98:288-298.

Farber HJ, Wattigney W, Berenson G. Trends in asthma prevalence: the Bogalusa Heart Study. Ann Allergy Asthma Immunol 1997; 78:265-269.

Gibson PG, Wlodarczyk JW, Hensley MJ, et al. Epidemiological association of airway inflammation with asthma symptoms and airway hyperresponsiveness in childhood. Am J Respir Crit Care Med 1998; 158:36-41.

Goodman DC, Stukel TA, Chang CH. Trends in pediatric asthma hospitalization rates: regional and socioeconomic differences. Pediatrics 1998; 101:208-213.

Haby MM, Peat JK, Mellis CM, Anderson SD, Woolcock AJ. An exercise challenge for epidemiological studies of childhood asthma: validity and repeatability. Eur Resp J 1995; 8:729-736.

Hu FB, Persky V, Flay BR, Zelli A, Cooksey J, Richardson J. Prevalence of asthma and wheezing in public school children: association with maternal smoking during pregnancy. Ann Allergy Asthma Immunol 1997; 79:80-87.

Kattan M, Mitchell H, Eggleston P, Gergen P, Crain E, Redline S, et al. Characteristics of inner-city children with asthma: the National Cooperative Inner-City Asthma Study. Pediatr Pulmonol 1997; 24:253-262.

Lenney W. The burden of pediatric asthma. Pediatr Pulmonol 1997; 15:13-16.

Mielck A, Reitmeir P, Wjst M. Severity of childhood asthma by socioeconomic status. Internat J Epidemiol 1996; 25:388-393.

Peat JK, Toelle BG, Gray EJ, Haby MM, Belousova E, Mellis CM, Woolcock AJ. Prevalence and severity of childhood asthma and allergic sensitization in seven climatic regions of New South Wales. Med J Austr 1995; 163:22-26.

Sears MR. Epidemiology of childhood asthma. Lancet 1997; 350:1015-1020.

Sennhauser FH, Kuhni CE. Prevalence of respiratory symptoms in Swiss children: Is bronchial asthma really more prevalent in boys? Pediatr Pulmonol 1995; 19:161-166.

Sporik R, Platts-Mills TA. Epidemiology of dust-mite related disease. Exp Appl Acarology 1992; 16:141-151.

To T, Dick P, Feldman W, Hernandez R. A cohort study on childhood asthma admissions and readmissions. Pediatrics 1996; 98:191-195.

Wasilewski Y, Clark NM, Evans D, Levison MJ, Levin B, Mellins RB. Factors associated with emergency department visits by children with asthma: Implications for health education. Am J Pub Health 1996; 86:1410-1415.

Woolcock AJ, Peat JK. Evidence for the increase in asthma worldwide. Ciba Foundation Symposia 1997; 206:122-134.